No. 16-1275

# In the Supreme Court of the United States

VIRGINIA URANIUM, INC., ET AL., PETITIONERS

*v.*

JOHN WARREN, ET AL.

*ON PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FOURTH CIRCUIT*

**BRIEF FOR THE UNITED STATES AS AMICUS CURIAE**


NOEL J. FRANCISCO
*Solicitor General*
*Counsel of Record*
JEFFREY H. WOOD
*Acting Assistant Attorney General*
MALCOLM L. STEWART
*Deputy Solicitor General*
JEFFREY E. SANDBERG
*Assistant to the Solicitor General*
VARU CHILAKAMARRI
*Attorney*
*Department of Justice*
*Washington, D.C. 20530-0001*
*SupremeCtBriefs@usdoj.gov*
*(202) 514-2217*

ANDREW P. AVERBACH
*Solicitor*
CHARLES E. MULLINS
JEREMY M. SUTTENBERG
*Attorneys*
*U.S. Nuclear Regulatory Commission*
*Washington, D.C. 20555*

## QUESTION PRESENTED

Whether the Atomic Energy Act of 1954 (AEA), 42 U.S.C. 2011 *et seq.*, preempts state laws that prohibit activities within a State's regulatory jurisdiction (here, conventional uranium mining) when such laws are grounded in radiological-safety concerns about related activities that are federally regulated under the AEA (here, the milling of uranium ore and disposal of "tailings" byproduct material).

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## BRIEF FOR THE UNITED STATES AS AMICUS CURIAE

### INTEREST OF THE UNITED STATES

This brief is submitted in response to the Court's order inviting the Solicitor General to express the views of the United States. In the view of the United States, the petition for a writ of certiorari should be granted.

### STATEMENT

1. a. The Atomic Energy Act of 1954 (AEA), 42 U.S.C. 2011 *et seq.*, establishes a comprehensive scheme for the regulation and development of nuclear energy. The AEA eliminated the federal government's "monopoly" over the "use, control, and ownership of nuclear technology," *Pacific Gas & Elec. Co.* v. *State Energy Res. Conservation & Dev. Comm'n*, 461 U.S. 190, 206 (1983) (*Pacific Gas*), and thereby sought "to encourage widespread participation in the development and utilization of atomic energy for peaceful purposes to the maximum extent consistent with the common defense and security and with the health and safety of the public," 42 U.S.C. 2013(d).

Responsibility for implementing the AEA is shared among the Nuclear Regulatory Commission (NRC), which serves as principal licensing and safety regulator, see 42 U.S.C. 5841-5845; the U.S. Department of Energy (DOE), which oversees federal research and promotional activities, see 42 U.S.C. 5811-5813, 7151(a); and the Environmental Protection Agency (EPA), which establishes generally applicable standards for certain radiation hazards, see, *e.g.*, 42 U.S.C. 2022.[1]

Among other responsibilities, NRC licenses and regulates the transfer, possession, use, and disposal of nuclear materials throughout the nuclear fuel cycle. "[S]ource material," including uranium, is regulated upon removal from its place of deposit in nature. 42 U.S.C. 2092; see 42 U.S.C. 2014(z) (defining "source material" to include "uranium"). The AEA provides that "no person may transfer or receive in interstate commerce * * * any source material after removal from its place of deposit in nature" unless "authorized by a general or specific license issued by [NRC]." 42 U.S.C. 2092; see 10 C.F.R. Pt. 40 (implementing regulations).

The AEA requires similar licenses for the transfer or possession of "special nuclear material," which includes uranium that has been "enriched in the isotope 233 or in the isotope 235." 42 U.S.C. 2014(aa); see 42 U.S.C. 2073-2074 (2012 & Supp. III 2015) (licensing requirements); 10 C.F.R. Pt. 70 (implementing regulations). The AEA also requires licenses for the transfer or possession of any "byproduct material" that is generated during nuclear-fuel production or use. See 42 U.S.C. 2014(e)(1)-(4) (defining several categories of "byproduct material");

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[1] These functions were allocated to NRC, DOE, and EPA in the 1970s, after the Atomic Energy Commission was abolished. See *Huffman* v. *Western Nuclear, Inc.*, 486 U.S. 663, 666 n.4 (1988).

42 U.S.C. 2111-2114 (licensing requirements); 10 C.F.R. Pts. 30-39 (implementing regulations). NRC also requires licenses for the operation of nuclear utilization and production facilities, including nuclear power plants, uranium enrichment facilities, and fuel-fabrication facilities, as well as spent-nuclear-fuel storage installations. See 42 U.S.C. 2014(v) and (cc), 2131-2133; 10 C.F.R. Pts. 50, 52, 72 (implementing regulations).

b. Nuclear source material may be obtained through several means. This case concerns conventional uranium recovery, through which uranium ore is excavated from the ground through open-pit or underground mining and then subjected to above-ground chemical processing. Pet. App. 4a. NRC does not regulate the physical excavation of uranium ore through conventional mining (as opposed to other, "in situ" methods of uranium recovery). See *In re Hydro Res., Inc.*, 63 N.R.C. 510, 512-513 (2006). But NRC requirements begin to apply once uranium is removed from its "place of deposit in nature." 42 U.S.C. 2092; see 10 C.F.R. 40.3; p. 2, *supra*.

Once excavated, the uranium ore is transferred by truck or conveyor belt to a nearby mill for processing. "Milling" involves physically grinding the ore into particles and then applying chemicals that separate the uranium from the surrounding rock. Pet. App. 54a-55a. This process generates a small quantity of concentrated uranium known as "yellowcake," as well as a large amount of sandy waste known as "tailings." *Id.* at 4a, 54a-55a & n.2; see H.R. Rep. No. 1480, 95th Cong., 2d Sess. Pt. I, at 11 (1978) (noting that milling 2000 pounds of uranium ore yields "only 1 to 5 pounds of usable uranium").

The yellowcake is "sold and shipped off-site for enrichment," Pet. App. 23a, while the tailings are typically

stored at a nearby site. Because uranium mill tailings contain several substances that are potentially hazardous to human health, *id.* at 205a, 210a, they are subject to extensive federal regulation. See 42 U.S.C. 2014(e)(2) (defining "byproduct material" to include uranium mill tailings). EPA is responsible for promulgating generally applicable health, safety, and environmental standards associated with the processing and disposal of uranium mill tailings. 42 U.S.C. 2022(b)(1)-(2); see 40 C.F.R. Pt. 192 (containing standards). NRC implements these standards through regulations and site-specific licensing conditions. See 42 U.S.C. 2111 (requiring licenses for byproduct material); 10 C.F.R. 40.1-40.3, 40.20-40.21, 40.26-40.28, 40.31(h), 40.32, 40.51 (regulating tailings "[b]yproduct [m]aterial" as defined in 10 C.F.R. 40.4); 10 C.F.R. Pt. 40, App. A (establishing "criteria relating to the operation of uranium mills and the disposition of tailings or wastes" from milling) (capitalization omitted).

c. Since 1959, the AEA has empowered NRC to enter agreements that authorize States to license and regulate the transfer, possession, use, and disposal of byproduct material, source material, and/or sub-critical quantities of special nuclear material. 42 U.S.C. 2021(b). NRC approves such an agreement under Section 2021 if the State has developed a regulatory program that is both "adequate to protect the public health and safety with respect to the materials within the State covered by the proposed agreement" and "compatible with [NRC's] program for the regulation of such materials." 42 U.S.C. 2021(d)(1)-(2).[2] Only a State that has entered into a Section 2021 agreement may regulate radiological hazards associated

[2] Certain AEA responsibilities are reserved to NRC and cannot be delegated to a State. 42 U.S.C. 2021(c).

with AEA materials. Cf. 42 U.S.C. 2021(b) (authorizing state regulation "[d]uring the duration of such an agreement"); S. Rep. No. 870, 86th Cong., 1st Sess. 12 (1959) (*Senate Report*) (stating that, absent such an agreement, "the Commission has exclusive authority to regulate for protection against radiation hazards").

Section 2021 also provides that "[n]othing in this section shall be construed to affect the authority of any State or local agency to regulate activities *for purposes other than protection against radiation hazards*." 42 U.S.C. 2021(k) (emphasis added). The italicized language "underscore[s] the distinction * * * between the spheres of activity left respectively to the Federal Government and the States." *Pacific Gas*, 461 U.S. at 210. Under that division, "the Federal Government maintains complete control of the safety and 'nuclear' aspects of energy generation," while "the States exercise their traditional authority over the need for additional generating capacity, the type of generating facilities to be licensed, land use, ratemaking, and the like." *Id.* at 212; see *id.* at 205 (similar).

2. a. In the late 1970s, the "largest known uranium deposit in the United States" was discovered in Pittsylvania County, Virginia. Pet. App. 5a, 216a. Following that discovery, the Virginia General Assembly directed a commission to "evaluate the environmental effects of uranium exploration, mining and milling," and to identify "any possible detriments" from those activities to the "health, safety, and welfare of Virginia citizens." 1981 Va. Acts 1404 (Pet. App. 169a-170a). In 1982, the General Assembly enacted a law that permitted uranium exploration, but imposed a one-year moratorium on uranium mining. See 1982 Va. Acts 426 (Pet. App. 170a-177a).

In 1983, the General Assembly extended the moratorium indefinitely. See 1983 Va. Acts 3 (1983 Act) (Pet. App. 177a-189a). It found that, "while uranium mining and milling activity can generate substantial benefits, it also raises a wide range of environmental and other local concerns." Pet. App. 178a. The 1983 Act directed that "permit applications for uranium mining shall not be accepted by any agency of the Commonwealth * * * until a program for permitting uranium mining is established by statute." *Id.* at 177a-178a. The 1983 Act also created a working group to consider, *inter alia*, the risk that "radionuclides" generated by "mining, milling and tailings management" could contaminate the surrounding water, air, and plant and animal life. *Id.* at 183a-184a.

In 1985, the commission and working group issued their final report. Pet. App. 219a. A majority of participants recommended lifting the moratorium, but only if the General Assembly "simultaneously" adopted certain recommendations "to assure adequate state regulation of uranium mining and milling." See D. Ct. Doc. 48-17, at 8 (Sept. 11, 2015). Those included the "essential" recommendation that Virginia become an "agreement state" under Section 2021, with the right to regulate milling and tailings storage, *id.* at 6; cf. 42 U.S.C. 2021, as well as proposed technical limits on radiological emissions from milling and tailings-storage activities, see D. Ct. Doc. 48-17, at 6-7. Despite those recommendations, the General Assembly neither lifted the moratorium nor enacted a "comprehensive mining, milling and tailing statute." See D. Ct. Doc. 48-14, at 7.

b. In 2009, Virginia signed a Section 2021 agreement with NRC, thereby acquiring regulatory authority over "[s]ource materials," "[s]pecial nuclear materials," and specified categories of "[b]yproduct materials" within

the Commonwealth. Pet. App. 300a; see *id.* at 298a-305a. The agreement expressly excluded the regulation of uranium mill tailings, however. See *id.* at 301a (excluding "[t]he regulation of byproduct material as defined in Section 11e.(2) of the [AEA]"); cf. 42 U.S.C. 2014(e)(2).

c. For several decades, the owners of the Pittsylvania County uranium deposit did not pursue efforts to overturn the Commonwealth's mining moratorium. When uranium prices rose sharply in the mid-2000s, however, the landowners lobbied for repeal of the ban. Pet. App. 222a. The General Assembly, the Governor, and Commonwealth agencies commissioned studies addressing the feasibility, benefits, and risks of potential uranium development. See *id.* at 222a-223a, 227a-228a. In 2013, bills to lift the moratorium were introduced in the General Assembly, but those legislative efforts failed. *Id.* at 228a-229a.

3. Petitioners are the current landowners of the Pittsylvania County uranium deposit. In 2015, petitioners brought suit in federal district court, asserting that the Commonwealth's moratorium was preempted by the AEA and seeking declaratory and injunctive relief. Pet. App. 190a-238a.

The district court dismissed petitioners' complaint for failure to state a claim. Pet. App. 53a-82a. The court acknowledged petitioners' allegation that the moratorium rested on "radiological safety concerns" associated with milling and tailings management. *Id.* at 68a. The court nonetheless concluded that the moratorium was not preempted because it facially applied only to mining, and conventional uranium mining is not regulated by NRC. *Id.* at 71a-80a. The court recognized that the mining ban "might obviate one's decision to mill and

manage the mill tailings" in Virginia, but suggested that "such a consequence [was] too far attenuated" to result in preemption. *Id.* at 80a.

4. The court of appeals affirmed. Pet. App. 1a-52a.

a. The court of appeals held that Virginia's moratorium was not preempted. Pet. App. 13a-19a. The court acknowledged that "uranium milling and tailings storage" are "regulated by the NRC," and it agreed that "[S]tates may therefore not regulate them except for purposes other than protection against radiation hazards." *Id.* at 13a-14a. But the court found it dispositive that "the plain language of the Commonwealth's ban does not mention uranium milling or tailings storage," *id.* at 14a, and it declined to "look past the statute's plain meaning to decipher whether the legislature was motivated to pass the ban by a desire to regulate uranium milling or tailings storage," *ibid.* While acknowledging that "sister circuits" had found state laws motivated by radiological-safety concerns to be preempted, the court found those decisions "distinguishable" because they involved laws that "surgically targeted," or "purport[ed] to regulate" directly, activities within NRC's jurisdiction. *Id.* at 16a-18a.

b. Judge Traxler dissented. Pet. App. 20a-52a. He explained that "established Supreme Court law makes clear that the AEA preempts state statutes enacted for the purpose of protecting against the radiological dangers of activities the AEA regulates," including "uranium milling and tailings management." *Id.* at 52a; see *id.* at 32a-38a. He further noted respondents' concession, for purposes of their motion to dismiss, that the Commonwealth had "banned uranium mining only as a means to prevent milling and tailings management from occurring in Virginia." *Id.* at 20a, 27a. Because "Congress

has taken away a state's ability to limit mining for th[at] particular reason," *id.* at 20a, Judge Traxler concluded that petitioners had stated a valid preemption claim.

## DISCUSSION

The Fourth Circuit held that a Virginia law allegedly motivated by concerns about the radiological safety of uranium milling and tailings-management activities, and intended to prevent those activities from occurring within the Commonwealth, may escape preemption so long as the law operates directly and immediately on an antecedent activity (mining) that is subject to state control. That cramped view of AEA preemption conflicts with this Court's decision in *Pacific Gas & Electric Co.* v. *State Energy Resources Conservation & Development Commission*, 461 U.S. 190 (1983) (*Pacific Gas*), and with published decisions of the Second and Tenth Circuits. The question presented is important and likely to recur in other nuclear-safety contexts, and this case is an appropriate vehicle to resolve it. The petition for a writ of certiorari therefore should be granted.

### A. The Court Of Appeals' Decision Is Incorrect

Petitioners' complaint states a claim that Virginia's moratorium on uranium mining is preempted by the AEA.

1. Federal law is "the supreme Law of the Land," U.S. Const. Art. VI, Cl. 2, and it may preempt state law in several ways. "First, Congress can define explicitly the extent to which its enactments pre-empt state law." *English* v. *General Elec. Co.*, 496 U.S. 72, 78 (1990). "Second, in the absence of explicit statutory language, state law is pre-empted where it regulates conduct in a field that Congress intended the Federal Government to occupy exclusively." *Id.* at 79. "Finally, state law is pre-empted to the extent that it actually conflicts with

federal law," including when "state law 'stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress.'" *Ibid.* (citation omitted).

This Court has addressed the AEA's preemptive reach on several occasions. In *Pacific Gas*, the Court concluded that the "Federal Government has occupied the entire field of nuclear safety concerns, except [for] the limited powers expressly ceded to the States." 461 U.S. at 212. The Court observed that the AEA gives NRC "exclusive jurisdiction to license the transfer, delivery, receipt, acquisition, possession, and use of nuclear materials," *id.* at 207, and permits state regulation of such materials only if authorized by agreement, *id.* at 208-209. The Court also explained that the AEA's preservation of state authority to "regulate activities for purposes *other than protection against radiation hazards*," 42 U.S.C. 2021(k) (emphasis added), "underscored the distinction" drawn by Congress "between the spheres of activity left respectively to the Federal Government and the States." 461 U.S. at 210. Under that division of responsibility, the federal government "regulate[s] the radiological safety aspects involved" in AEA activities—there, the "construction and operation of a nuclear plant"—while the States retain their "traditional responsibility" to "determin[e] questions of need, reliability, cost, and other related state concerns" not involving radiological safety. *Id.* at 205. The Court found that the state statute at issue in *Pacific Gas*, which imposed a moratorium on construction of new nuclear plants, survived preemption only because the State had plausibly explained that the purpose of its legislation was to address "economic problems, not radiation hazards." *Id.* at 213; see *id.* at 213-216.

In the present case, the court of appeals cited other language in *Pacific Gas* commenting on the difficulty of ascertaining "legislative motive." Pet. App. 14a (quoting *Pacific Gas*, 461 U.S. at 216). The *Pacific Gas* Court made those observations, however, only after stating that it was "necessary to determine whether there [was] a nonsafety rationale for" the challenged California law, 461 U.S. at 213; that California had asserted an economic, non-safety-related rationale for that law, *ibid.*; and that the court of appeals in that case had found the law to be "directed towards purposes other than protection against radiation hazards," *id.* at 214 (citation omitted). Here, by contrast, the Fourth Circuit simply "decline[d] to examine why the Commonwealth chose to ban uranium mining," Pet. App. 15a, thus treating as irrelevant petitioners' allegation that Virginia's mining moratorium is intended to address radiological-safety hazards associated with milling and tailings-management activities.

In *Silkwood* v. *Kerr-McGee Corp.*, 464 U.S. 238 (1984), the Court explained that *Pacific Gas* had "examined the relationship between federal and state authority in the nuclear energy field" and had "concluded that States are precluded from regulating the safety aspects of nuclear energy." *Id.* at 240-241. The Court observed that "Congress' decision to prohibit the States from regulating the safety aspects of nuclear development was premised on its belief that the Commission was more qualified to determine what type of safety standards should be enacted in this complex area." *Id.* at 250.

In *English* v. *General Electric Co.*, *supra*, the Court explained that the AEA establishes two related forms of field preemption. 496 U.S. at 84. Observing that *Pacific Gas* had "defined the pre-empted field, in part, by

reference to the motivation behind the state law," the Court reaffirmed that a state law "motivated by safety concerns" about NRC-regulated activities is preempted. *Ibid.* The Court further held that even state regulation "'enacted out of nonsafety concerns'" would be preempted if it had a sufficiently "direct and substantial effect" on NRC licensees' decisions "concerning radiological safety levels." *Id.* at 84-85 (quoting *Pacific Gas*, 461 U.S. at 212). Thus, "even as * * * part of the preempted field is defined by reference to the purpose of the state law in question," "another part of the field is defined by the state law's actual effect on nuclear safety." *Id.* at 84.

2. a. Petitioners have adequately alleged that Virginia's moratorium falls within the preempted "field of nuclear safety concerns." *English*, 496 U.S. at 82 (quoting *Pacific Gas*, 461 U.S. at 212). Petitioners contend that the Commonwealth has banned uranium mining not because of concerns about mining per se, but because of fears about radiological hazards associated with the next steps of the uranium-development process, which NRC regulates under the AEA. Petitioners allege that the "true design" of the moratorium is "to act as an absolute bar on the construction of a tailings management facility," which state legislators feared would lead to radioactive contamination of the groundwater and environment. Pet. App. 232a.

If petitioners' allegations are correct, Virginia's moratorium is preempted. The radiological safety of milling and tailings management is subject to exclusive federal oversight. Just as "[a] State moratorium on nuclear construction * * * falls squarely within the prohibited field" if such a moratorium is "grounded in safety concerns" about the operation of NRC-licensed nuclear power

plants, *Pacific Gas*, 461 U.S. at 213, so too a State's moratorium on uranium mining is preempted if that moratorium is grounded in safety concerns about the operation of NRC-licensed milling and tailings-management facilities. The fact that conventional mining of uranium ore is not subject to NRC regulation does not save Virginia's law. A State's purposeful effort to regulate the radiological hazards of AEA activities is preempted even if the State attempts to regulate those hazards indirectly, as by prohibiting necessary antecedent activities that fall outside direct federal control.

*Pacific Gas* illustrates this point. The state agency in that case argued that, "although safety regulation of nuclear plants by States is forbidden, a State may completely prohibit new construction until its safety concerns are satisfied by the Federal Government." 461 U.S. at 212. The Court "reject[ed] this line of reasoning," explaining that "the Federal Government has occupied the entire field of nuclear safety concerns" associated with nuclear-plant operations. *Ibid.* The Court therefore found it "necessary to determine whether there [was] a nonsafety rationale" for California's moratorium on plant construction. *Id.* at 213. *Pacific Gas* thus establishes that "a state cannot use its authority to regulate law enforcement and other similar matters as a means of regulating [the] radiological hazards" associated with AEA-regulated activities. *Skull Valley Band of Goshute Indians* v. *Nielson*, 376 F.3d 1223, 1248 (10th Cir. 2004) (*Skull Valley*), cert. denied, 546 U.S. 1060 (2005).

b. A state law banning uranium mining based on radiological-safety concerns about milling and tailings management also runs afoul of conflict-preemption principles. "[A] state judgment that nuclear power is

not safe enough to be further developed would conflict directly with the countervailing judgment of the NRC." *Pacific Gas*, 461 U.S. at 213. Here, Virginia has allegedly "interfere[d] with the objective of the federal regulation" by deciding for itself that milling and tailings management cannot safely be undertaken. *Id.* at 219. But Congress committed those safety considerations to NRC's oversight. See *id.* at 212 (recognizing that a State's enactment of technical specifications for a nuclear power plant would "directly conflict with the NRC's exclusive authority over plant construction and operation"); cf. *id.* at 226 (Blackmun, J., concurring in part and concurring in the judgment) ("The Court suggests that a safety-motivated state ban on nuclear plants would be pre-empted under th[e] [conflict-preemption] standard as well."). If petitioners' allegations are true, Virginia's moratorium has "circumvented the AEA's requirements and frustrated its objectives" by intentionally "prevent[ing] the occurrence of" activities that Congress intended NRC to regulate, for reasons committed to NRC's jurisdiction. Pet. App. 21a, 52a (Traxler, J., dissenting).

States concerned about radiological hazards may utilize other mechanisms that do not stand as an obstacle to Congress's objectives. States may seek NRC's authorization to regulate uranium mill tailings. See pp. 4-5, *supra*. If granted this authority, a State may impose radiological-safety standards that are "more stringent than" those adopted and enforced by NRC. 42 U.S.C. 2021(*o*)(2). Despite obtaining a Section 2021 agreement for other kinds of nuclear materials, Virginia declined

to seek such authority for uranium mill tailings. See Pet. App. 21a, 49a-50a (Traxler, J., dissenting).[3]

3. In holding that Virginia's moratorium was not preempted, the court of appeals observed that the statute "does not mention uranium milling or tailings management," Pet. App. 14a, and the court "decline[d]" to "look past the statute's plain meaning to decipher whether the legislature was motivated" by an impermissible radiological-safety consideration, *ibid.* It is well-established, however, that field-preemption analysis under the AEA requires assessing the State's purpose. See 42 U.S.C. 2021(k) (saving from preemption state regulation undertaken "for purposes other than protection against radiation hazards"); *English*, 496 U.S. at 84 (reaffirming that "part of the pre-empted field is defined by reference to the purpose of the state law in question"); *Pacific Gas*, 461 U.S. at 214 (deferring to lower court's factual assessment that the challenged law was "directed towards purposes other than protection against radiation hazards") (citation omitted).

Respondents' alternative arguments also lack merit. Respondents assert that, because "nothing in the [AEA] regulates the conventional mining of uranium on non-federal lands," the "States can regulate or prohibit such mining for *any* reason, including radiological safety concerns." Br. in Opp. 17. Respondents view the "purpose" test as preempting a state law only if it *both* "regulates an NRC-regulated activity" *and* does so "based

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[3] States concerned about the safety of AEA-regulated activities may also participate in NRC licensing and rulemaking proceedings and may seek judicial review of NRC's determinations if they are aggrieved. See *Entergy Nuclear Vt. Yankee, LLC* v. *Shumlin*, 733 F.3d 393, 427-428 (2d Cir. 2013) (noting this point); *Skull Valley*, 376 F.3d at 1254 (same).

on radiological safety concerns." *Id.* at 18. But that view is irreconcilable with *Pacific Gas*, which observed that a statute that "seek[s] to regulate the construction or operation of a power plant" would "clearly be impermissible * * * even if enacted out of nonsafety concerns." 461 U.S. at 212. Thus, the "purpose" test has practical relevance only where a State is operating within a field where a State enjoys substantive authority to regulate.

State regulation of conventional uranium mining is permissible if that regulation is grounded in concerns about mining itself, which is not subject to NRC regulation. But if Virginia's mining moratorium was intended to address radiological-safety concerns purportedly raised by subsequent milling and tailings management activities—activities that NRC *does* regulate—the State cannot escape preemption simply by imposing its prohibition one step earlier in the production process. In *Pacific Gas*, the Court acknowledged that NRC "was not given authority * * * over the economic question whether a particular [nuclear] plant should be built," 461 U.S. at 207, and it held that a State could forbid such construction if it did so for economic reasons, see *id.* at 213-216. The Court made clear, however, that a functionally identical state-law ban would be preempted if it was "grounded in safety concerns" or rested on "a state judgment that nuclear power is not safe enough to be further developed," since such a judgment "would conflict directly with the countervailing judgment of the NRC." *Id.* at 213; see *ibid.* ("A state moratorium on nuclear construction grounded in safety concerns falls

squarely within the prohibited field."). The same principles apply here.[4]

Respondents are likewise wrong in placing dispositive weight on the fact that the Virginia statute does not expressly "prohibit[] or otherwise regulate[] milling facilities or tailings storage." Br. in Opp. 26; see *id.* at 30. Once uranium ore is mined, milling and tailings management are the next steps in the production process. See pp. 3-4, *supra*. Reports and studies reflect that Virginia decisionmakers understood that mining, milling, and tailings storage would occur at a single "uranium development complex." D. Ct. Doc. 48-14, at 16; see, *e.g.*, D. Ct. Doc. 48-10, at S-1 ("A uranium development facility typically includes a mine, a mill, and a tailings (waste) management area."). Those reports also reflected an awareness that, although "milling and tailings are regulated under federal law," "mining is regulated under state law." D. Ct. Doc. 48-15, at 10. Petitioners have adequately alleged that respondents banned "the antecedent mining of uranium ore" *for the purpose of* rendering infeasible any milling or tailings storage in the Commonwealth. Pet. Reply Br. 1.

Respondents' remaining arguments fare no better. Although Section 2021(k) is framed as a "savings clause"

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[4] If construction of a new nuclear power plant is allowed to proceed, NRC generally exercises exclusive authority over the specifications of its construction (*e.g.*, thickness of spent-nuclear-fuel pool walls). But the state law at issue in *Pacific Gas* addressed the antecedent question *whether* a plant should be constructed, not *how* it should be constructed. See 461 U.S. at 212. The court of appeals in the present case therefore was wrong in describing *Pacific Gas* as involving an activity "clearly committed to the NRC's regulatory authority." Pet. App. 10a & n.2 (citation omitted). The district court committed the same error. See *id.* at 77a-78a.

(Br. in Opp. 6, 20), and the AEA contains no express-preemption provision, such statutory schemes may nonetheless give rise to preemption. See, *e.g.*, *International Paper Co.* v. *Ouellette*, 479 U.S. 481, 493 (1987). Indeed, Section 2021(k) "underscore[s]" Congress's intention that the federal government would possess exclusive authority over "'protection against radiation hazards'" associated with AEA materials. *Pacific Gas*, 461 U.S. at 210 (quoting 42 U.S.C. 2021(k)).[5] And although States may permissibly regulate "radiation hazards * * * outside [NRC's] bailiwick," including hazards associated with "x-ray equipment [and] radon-screening companies," Br. in Opp. 21 (footnote omitted), the moratorium here was allegedly motivated by concerns about uranium milling and tailings management, which are subjects "regulated by the [AEA]," Pet. App. 41a n.13 (Traxler, J., dissenting).

Contrary to respondents' suggestion (Br. in Opp. 22), petitioners' approach would not leave a regulatory lacuna. States retain the authority to regulate conventional uranium mining—or to prohibit it altogether—so long as its laws do not have the "purpose" or "direct and substantial effect" of regulating the radiological hazards of NRC-licensed activities. *English*, 496 U.S. at 85. Thus, applying *Pacific Gas* would not mean that "entities could mine free of government oversight." Br. in Opp. 22 (quoting Pet. App. 13a).

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[5] The bill containing Section 2021(k) originally included a sentence expresaly preempting state laws regulating the radiation hazards of AEA materials. That sentence was struck as "unnecessary" because, "[w]ith or without th[e] sentence," a State could not regulate radiological hazards unless it first "enter[ed] into an agreement with the Commission." *Senate Report* 3.

To be sure, "Congress did not intend that nuclear power be developed 'at all costs,'" and it generally left States free to address concerns other than radiological safety. *Pacific Gas*, 461 U.S. 200; see *id.* at 222-223. But Congress and NRC have made the judgment that milling and tailings management may be undertaken safely under federal regulations. *Id.* at 213. A moratorium intended to render such activities infeasible, based on a State's disagreement with that federal safety judgment, both intrudes upon an exclusively federal field and "stands as an obstacle" to the fulfillment of Congress's objectives. *English*, 496 U.S. at 79 (citation omitted).

### B. The Decision Below Conflicts With Decisions Of Other Courts Of Appeals

In addition to conflicting with *Pacific Gas*, the court of appeals' ruling conflicts with decisions of the Second and Tenth Circuits in cases involving analogous claims of AEA preemption. Those courts held that state laws grounded in radiological-safety concerns were preempted, even though the immediate objects of state regulation involved areas of traditional state authority.

In *Skull Valley*, *supra*, the Tenth Circuit considered a series of Utah laws motivated by concerns about the storage and transportation of spent nuclear fuel (SNF). Although some of the challenged laws facially regulated SNF, others did not. One provision converted to state control a county road that led to a proposed SNF storage site. 376 F.3d at 1251-1252. Another provision restricted counties' abilities to provide "law enforcement, fire protection, waste and garbage collection" to SNF storage facilities. *Id.* at 1247. A third provision abolished limited liability for stockholders in companies operating such facilities. *Id.* at 1250-1251. Although the AEA does not regulate state roads, municipal services, or shareholder-

liability rules, the Tenth Circuit concluded that "a state cannot use its authority to regulate" such matters "as a means of regulating radiological hazards" associated with NRC-licensed activities. *Id.* at 1248. The court ultimately found each provision preempted, based on evidence that the State had enacted them to discourage the transportation and storage of SNF "for reasons of radiological safety." *Id.* at 1252; see *id.* at 1245-1248, 1250-1253.[6]

The court of appeals in this case found *Skull Valley* "distinguishable" because Utah's laws "surgically targeted the transportation and storage of spent nuclear fuel." Pet. App. 16a. Petitioners have similarly alleged, however, that Virginia banned uranium mining solely to prevent milling and tailings management. *Id.* at 215a-232a. The court below also suggested that Virginia's "two-sentence moratorium" on uranium mining "pales in comparison" to the "comprehensive scheme" enacted by Utah. *Id.* at 17a. But the Tenth Circuit in *Skull Valley* analyzed the challenged provisions individually, and it held that the AEA preempted even those provisions that did not "specifically mention[] th[e] NRC-regulated activity." *Id.* at 16a; see *id.* at 42a-44a (Traxler, J., dissenting).

The court of appeals' decision also conflicts with *Entergy Nuclear Vermont Yankee, LLC* v. *Shumlin*, 733 F.3d 393 (2d Cir. 2013) (*Entergy*), which concerned a series of Vermont laws providing that a nuclear power plant could renew its operating license and store newly generated SNF only with explicit approval by the state

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[6] When the State petitioned for a writ of certiorari, the United States filed a brief at this Court's invitation expressing the view that the challenged Utah laws were preempted. See U.S. Amicus Br. at 10-19, *Nielson* v. *Private Fuel Storage, L.L.C.*, No. 04-575 (Nov. 4, 2005).

legislature. *Id.* at 401, 403. In an effort to avoid preemption, the legislature included findings that these laws were based on "economic" and other nonsafety concerns. *Id.* at 415-416, 424. But the Second Circuit concluded that the preemption inquiry "[did] not end at the text of the statute," *id.* at 416, and that it was necessary to "determine the actual intent motivating [the laws'] passage," *id.* at 424. The court canvassed the legislative record and ultimately determined that the laws were improperly "grounded in safety concerns" and therefore preempted. *Id.* at 428 (citation omitted); see *id.* at 415-428. This "more searching review" into the laws' "true purpose," which the court understood to be required by *Pacific Gas*, see *id.* at 416, cannot be squared with the Fourth Circuit's refusal to consider anything apart from the statutory text. Cf. Pet. App. 14a.

The court of appeals stated that the Second Circuit in *Entergy* "sought to determine the Vermont legislature's intent only after holding that the challenged law regulated an 'activity'—the operation of nuclear power plants—within the meaning of Section 2021(k) of the [AEA]." Pet. App. 17a. That is incorrect. The Second Circuit found the laws preempted because they were motivated by radiological-safety concerns, not because the laws facially regulated an NRC-regulated activity. See *Entergy*, 733 F.3d at 435 (Carney, J., concurring) (making same observation). Indeed, a state law that directly regulated nuclear-power operations would be preempted "even if enacted out of nonsafety concerns." *Pacific Gas*, 461 U.S. at 212; see *English*, 496 U.S. at 85 n.7; Pet. App. 45a-46a (Traxler, J., dissenting).

### C. The Question Presented Is Important And Squarely Presented Here

"'[T]he Federal Government has occupied the entire field of nuclear safety concerns, except the limited powers expressly ceded to the States.'" *English*, 496 U.S. at 82 (quoting *Pacific Gas*, 461 U.S. at 212). This case presents the question whether a State may address purported radiological-safety concerns indirectly, through regulations designed to render practically infeasible activities that the State believes to be unsafe but that are subject to exclusive NRC oversight.

That question is important: The preemptive field of "nuclear safety concerns" covers not only the early stages of fuel development (such as milling and tailings-management), but also each subsequent stage of the nuclear fuel cycle. Under the Fourth Circuit's analysis, States could effectively prevent federally regulated activities that the States believe to be unsafe, by erecting "bottlenecks" at antecedent stages that are not themselves subject to federal regulation. States could, for example, pass laws that impede physical access to nuclear facilities, diminish the availability of source materials or equipment necessary for nuclear development, or erect financial barriers to the development of nuclear energy. States will likely continue to face pressures to restrict or prohibit private nuclear-energy development. See, *e.g.*, *Entergy*, 733 F.3d at 413 & n.20 (noting that the development of interstate energy markets has resulted in "less public support for continued operation of in-state nuclear power plants and greater opposition to such local plants on safety as well as non-safety grounds"). Review here would assist state legislators, as well as lower courts and federal regulators, by clarifying the AEA's preemptive scope.

This case presents a suitable vehicle to address the question presented. Respondents have conceded that, for purposes of their motion to dismiss, the courts should take as true petitioners' allegation that the Virginia moratorium was motivated by radiological-safety concerns. This Court therefore need not decide what evidence would be necessary or sufficient to prove those allegations. Rather, the Court need only decide whether such a motivation, if proved, would provide a sound basis for holding the Virginia moratorium to be preempted, even though the immediate object of the moratorium (uranium mining) is an activity subject to state rather than federal regulation.

## CONCLUSION

The petition for a writ of certiorari should be granted.

Respectfully submitted.

NOEL J. FRANCISCO
*Solicitor General*
JEFFREY H. WOOD
*Acting Assistant Attorney General*
MALCOLM L. STEWART
*Deputy Solicitor General*
JEFFREY E. SANDBERG
*Assistant to the Solicitor General*
VARU CHILAKAMARRI
*Attorney*

ANDREW P. AVERBACH
*Solicitor*
CHARLES E. MULLINS
JEREMY M. SUTTENBERG
*Attorneys*
*U.S. Nuclear Regulatory Commission*

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